

# UNIFORM BALLOT AND VOTING SYSTEMS PROCEDURES GUIDE

Security, Testing, Inventory, and Troubleshooting

Montana Secretary of State

<u>sosmt.gov</u> • <u>soselections@m</u>t.gov

# **CONTACT INFORMATION**

# Secretary of State's Office (444-9608)

- Dana Corson, Director of Elections
  - **444-3334**
- Stuart Fuller, Elections and Voter Services Manager
  - **444-4282**

# **Election Systems & Software**

- Customer Service
  - **(877) 377-8683 (option 6)** 
    - Hardware and Software (option 4)
- Lori Mommaerts, Regional Sales Manager (206) 250-4318

# **Contents**

PHYSICAL SECURITY	3
Chain of Custody	3
Chain of Custody – Ballots & Election Definition Media Card	3
Chain of Custody – Voting Equipment	3
Security Seal Log	4
Security Seal Placement – Voting Systems	4
Delivery of Voting Systems, Ballots, and Election Materials	7
Early Pick Up of Ballots Prior to the Close of Polls	8
Return of Voted Ballots and Voting Systems after Close of Polls	8
Secured Storage	9
CYBERSECURITY	11
Cyber Threats	11
Internet Connections	11
Spam	11
Phishing	11
Malware	11

	Best Practices	12
	Login and Passwords	12
	Accounts Management	12
	Restrict Administrative Privileges	12
	Limiting Exposure	13
V	OTING SYSTEMS TESTING	14
	Voting Systems	14
	Performance Testing.	14
	Acceptance Testing	14
	Internal Testing	15
	Public Testing	15
	Election Day Testing	15
	Testing Methodology	15
	Test Deck	16
	Test Deck Ballot Matrix	16
	Testing Procedures by Voting System	17
	Ballot Marking Device (AutoMARK)	17
	Ballot Marking Device (ExpressVote)	18
	Tabulators (M100/DS200/M650/DS450/DS850)	19
	Election Management System (Election Results Manager)	20
V	OTING EQUIPMENT INVENTORY	21
TI	ROUBLESHOOTING	23
	M100 Troubleshooting	23
	DS200 Troubleshooting	27
	DS450 & DS850 Troubleshooting	29
	AutoMARK Troubleshooting	34
	Express Vote Troubleshooting	38

#### PHYSICAL SECURITY

There are a number of security procedures that can be implemented to make election processes significantly more secure while mitigating concerns about tampering, sabotage, and conspiracy.

# **Chain of Custody**

In regard to elections, a chain of custody is chronological documentation that shows the control, transfer, and disposition of sensitive election-related materials. Voting equipment and ballots should be sealed using tamper-evident seals and the seal number should be entered onto a chain of custody log. The chain of custody should be maintained by the Election Administrator in order to ensure the security of sensitive materials (i.e. ballots, election definition media card, and voting systems) and to provide evidence that access to voting equipment and ballots is properly controlled throughout the election process.

The chain of custody form includes four sections:

- the preparation of materials by the Election Administrator
- the receipt of materials at the polling place
- the preparation of materials after the close of polls
- the return receipt of materials by the Election Administrator

#### Chain of Custody – Ballots & Election Definition Media Card

Upon receipt of ballots and election media, these materials should be sealed in their respective containers until use and should be stored in a secure location with limited access. Record the seal number on the Ballots and Election Materials Chain of Custody & Security Seal Log form.

#### Chain of Custody – Voting Equipment

Once acceptance testing of voting equipment has been completed, access points should be sealed with serial numbered, tamper-evident security seals and recorded on the chain of custody log. At the conclusion of Internal Testing, the election definition media card should be sealed in each machine. The security seal serial number should be recorded on the chain of custody log. After the first portion of the chain of custody log is complete, voting systems can be transported to the polling place where the Polling Place Manager or Chief Election Judge and another election judge will verify that the seal numbers listed on the form are the same as those on the machine. This individual and the other election judge will complete the second portion of the chain of custody log.

#### **Security Seal Log**

In order to provide greater evidence of the replacement of tamper-evident seals, the chain of custody log is accompanied by a security seal log. When a security seal is removed from sensitive items and replaced with a new security seal, the used security seal should be placed and recorded on the security seal log. <u>DO NOT THROW AWAY USED SECURITY SEALS</u>.

# **Security Seal Placement – Voting Systems**

Once acceptance testing is complete, tamper-evident seals should be placed over the points of potential access on a voting system. Detailed below are diagrams of where security seals should be placed on respective voting systems.

#### AutoMARK

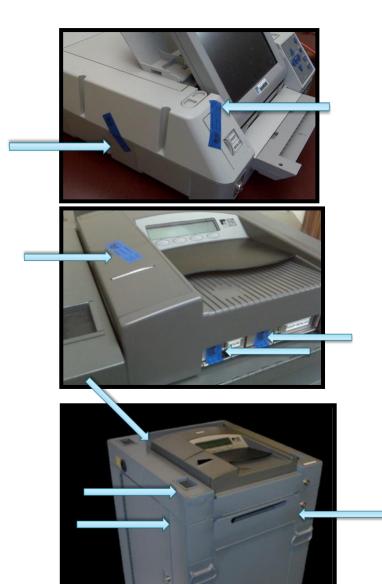
- Election media access panel
- Across the case halves
- DO NOT place seal over ADA port

#### M100

- Access slots
- Printer/Key access
- Ballot box
  - Ballot access doors (2)
  - Accessory bin (1)
  - All storage access points (4)

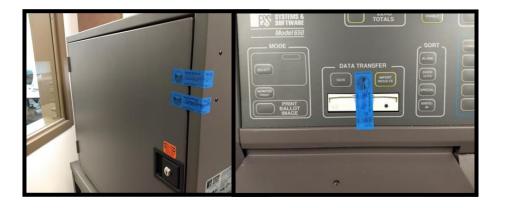
#### DS200

- Seal on USB/Power latch (1)
- Across the case halves (1)
- Ballot box
  - All storage access points (4)



# M650

- Across media port (1)
- Across rear door (1)



# DS450

- Right-hand side of machine (1)
  - Seal on outer door
- Left-hand side of machine (1)
  - Seal on outer door
- Back hatch of machine (1)



#### DS850

- Right-hand side of machine
  - Seal on each USB door (3)
- Left-hand side of machine
  - Seal on outer door (1)
- Back hatch of machine (1)



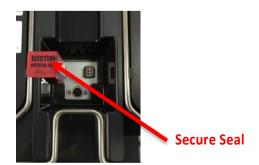
# Election Management Hardware

- Across all access points, including USB ports
- Ensure that this computer is never connected to the internet or internal network



# ExpressVote

- Access Compartment
- Access Compartment Door
- Paper Path
- Rear USB port
- Front Lock









# **Delivery of Voting Systems, Ballots, and Election Materials**

When delivering voting systems, ballots, and election materials to polling places, the following procedures shall apply:

- At a time determined by the Election Administrator, at least two designated election officials or one designated election official and a law enforcement officer shall deliver the voting systems, ballots, and other materials to the polling place. The Election Administrator may employ other individuals to assist in these deliveries. However, these individuals must be directly supervised by sworn election officials.
- The Election Administrator shall administer the oath to anyone designated to deliver voting systems, ballots, and other materials to polling places.
- Voting systems, ballots, and other materials should be transported by at least two election officials or one designated election official and a law enforcement officer at all times.

The individuals responsible for transporting voting systems, ballots, and other materials shall:

- Verify that all the supplies provided by the Election Administrator are present. Ensure that
  the Certificate of Number of Ballots and the Chain of Custody and Security Seal Log forms
  are included.
- Examine the security seals on the voting systems, ballots, and other materials for evidence of damage, tampering, or removal.
- Verify that the security seal numbers match the chain of custody log. Report any discrepancies to the Election Administrator.
- Without opening the ballot package, ensure the ballots intended for delivery are the correct ballots for the respective polling place.
- Transport the voting systems, ballots, and other materials to the polling place.
- If delivery to the polling place occurs before election day, the voting systems, ballots, and other materials must be stored in a temporary secure location. At no time shall the voting systems, ballots, or other materials be stored in a location other than the temporary secure location determined by the Election Administrator.
- Upon arrival at the polling place, deliver the voting systems, ballots, and other materials to the Chief Election Judge.
- Ask polling place officials to examine the security seals on the voting systems, ballots, and other materials for evidence of damage, tampering, or removal and verify that the seal numbers match the seals on the log.
- Complete the second sections of the respective chain of custody and security seal logs.

# Early Pick Up of Ballots Prior to the Close of Polls

If directed by the Election Administrator, arrangements may be made to pick up ballots and return them to the election office or designated tabulation location before the close of polls. When applicable for post-election audit purposes, follow the Election Administrator's instructions regarding sorting and tracking ballots based on the tabulator(s) that scanned the ballots.

For each early pick up of ballots, the following steps must be conducted:

- Election officials shall seal the ballot box or place the ballots in the designated container with numbered security seals. The seal numbers must be recorded on the chain of custody and security seal log.
  - Using the Ballot Reconciliation Report, ensure that all ballots issued and marked in the poll book prior to the early pick up are sealed for return to the election office or designated tabulation location.
  - As ballots are removed from tabulators, ensure that ballots and tabulator reports are separated and marked according to your county's post-election audit procedures (e.g. color coded, numbered, precinct name, etc.).
    - When printing early pick up tabulator reports, be sure to NOT clear the totals, unless instructed to do so by your election administrator.
  - Two election officials or one designated election official and a law enforcement officer must transport the ballot box or ballot container to the election office or designated tabulation location.
    - Upon arrival at the election office or the designated tabulation location, the receiving election officials must ensure that the seals on the ballots, voting equipment (when applicable), and election materials are intact and that the seal numbers match the numbers recorded on the chain of custody and security seal log. Any discrepancy should be noted on the log and explained in writing.

#### **Return of Voted Ballots and Voting Systems after Close of Polls**

Upon the close of polls, the following steps must be conducted:

- Check the Auxiliary Bin for ballots and scan any ballots deposited in the Auxiliary Bin unless directed otherwise by the election administrator.
- Print tabulator reports according to election administrator procedures and according to this guide.

- Shut down the tabulator.
- Counties using precinct tabulators may choose to either:
  - Return the tabulator to the election office with the election definition media card sealed in the tabulator; or
  - Remove the election definition media card and return it in a sealed container with the tabulator's ballots and report. This scenario would be applicable if the tabulator is being returned to the election office at a later time.
    - If the election definition media card is returned separately from the tabulator, ensure that the tabulator's media card slot is re-sealed and the chain of custody and security seal log is updated.
    - NOTE: The AutoMARK election definition media card should remain sealed in the unit, as there are no results contained on an AutoMARK's media card.
- Remove ballots from the tabulator ballot box(es) and seal in a transportation ballot container.
  - As ballots are removed from tabulators, ensure that ballots and machine reports are separated and marked according to the county's post-election audit procedures (e.g. color coded, numbers, precinct name, etc.).
  - Place write-in ballots from the Write-In Bin in an envelope or container marked "Write-In Bin." Place the envelope in the ballot container with the other voted ballots.
  - Seal the transportation ballot container using a tamper-evident security seal and record the seal number on the chain of custody and security seal log.
- Ensure all security seal numbers are recorded on the chain of custody and security seal log. Verify that the log is completed and returned with the ballots to the election office or tabulation location.
- Upon arrival at the election office or the designated tabulation location, the receiving
  election official must ensure that all security seals are intact and match the seal numbers
  recorded on the chain of custody and security seal log. Any discrepancies should be noted
  on the log and explained in writing.

# **Secured Storage**

Voting systems, ballots, and election materials should be stored in a location that is locked at all times, has access controlled by the Election Administrator, and has a log that details access. This log should include the name of the person accessing the secured storage, date of access, entry and exit times, and the purpose for the visit. Non-election staff should be accompanied by a member of the election office at all times whenever equipment in secured storage is

accessed. Voting equipment that cannot be contained in secured storage should be housed in a room with controlled access.

#### When storing voting systems, verify the following:

- All additional equipment used with a particular voting system is accounted for.
- Security seal numbers match the numbers recorded on the chain of custody log and the machine has been visually inspected for signs of unauthorized access.
- Replace any security seals that were removed and record the seal number(s) on the chain of custody log.
- Examine the unit for cracks, dents, and structural deficiencies (case, cover, latches, hinges, wheels, stand, power cord and plug, etc.).
- Schedule maintenance for any equipment in need of repair or replacement parts.
- Seal and store ballots and election related materials.
- Secure election definition media card until all post-election audits and canvass are complete.

#### When storing ballots, verify the following:

- Collect and label all ballots for storage according to the county's post-election audit guidelines (e.g. color-coded, numbers, precinct name, etc.).
- Seal the labeled ballot containers and record the security seal numbers on the chain of custody and security seal log describing the contents of the container (e.g. which ballots, which tabulator counted the ballots, etc.).
- Collect, label, and seal all of the related election materials (e.g. logs, sets of test ballots, etc.). Record these security seal numbers on a log describing the materials.
- Store the ballots and other election materials in a secure location with limited access.

#### **CYBERSECURITY**

As technology becomes more interwoven with elections, cybersecurity is a growing concern. Elections professionals are now expected to have in-depth knowledge, if not expertise, in information technology relative to how elections are conducted.

Understanding information technology involves learning about cyber threats and the best practices that can be put into place in order to mitigate potential cybersecurity issues.

#### **Cyber Threats**

With increased access to voting and election offices via information technology, measures must be taken to protect computer systems from attack and unauthorized access to hardware and software.

#### **Internet Connections**

The Internet is the avenue by which cyber threats can access elections technology. There are a number of attack vectors, or paths, by which hackers can gain access to a computer or network in order to deliver a malicious payload. Some examples of these potential attack vectors include spam, phishing, malware, ransomware, and spyware.

#### Spam

Email is one of the ways in which voters communicate with election officials. Along with all the valid emails that an election office receives, many of the messages can be considered spam – unsolicited junk email that is often sent for commercial purposes. Some of these messages, however, contain malicious content intended to disrupt operations.

#### **Phishing**

One type of cyber threat that comes with email is spear phishing, commonly referred to as just phishing. Phishing is the practice of sending fraudulent emails purporting to be from a reputable source in order to manipulate users into clicking on a malicious link or downloading a malicious file attachment. Systems infected by phishing attacks act as an entry point for viruses and other threats to spread through an organization and potentially obtain voter's personally identifiable information.

#### Malware

Malicious software that is intended to damage or disable computers and computer systems is referred to as malware.

Ransomware is a type of malware designed to block access to a computer system and data until a sum of money is paid. This type of threat can spread to shared storage drives and other systems to which it can gain access. Even if the demands are met, the system or data may remain unavailable or deleted.

Spyware is software that enables a user to obtain information about a computer's activities by transmitting data covertly from the hard drive.

#### **Best Practices**

Cybersecurity is not an issue that is specific to counties with the most voters. Every county election office has the same level of vulnerability to cyber threats. Regardless of geographic location or number of voters, every election office has the same level of risk to cyber threats.

Good "cyber hygiene" practices can protect networks against threats from malicious actors and maintain the integrity of election systems and, therefore, the public's trust in election administration. It is imperative that all county election offices adopt similar policies and put them into action in order to keep the state's collective election offices safe from cyber threats.

#### **Login and Passwords**

On the rare occasion that an attacker gains physical access to your workstation, they will immediately begin looking for written passwords and authentication material. This risk arises not only from a completely unknown outsider, but also from internal staff or others that have access to your office and malicious intent.

#### **Accounts Management**

Unused or seldom used accounts make excellent targets for those who are attempting to access secured systems. In order to minimize the possibility of illicit access, it is important to remove or disable accounts that are no longer in use or are only used periodically. Accounts should be linked to a specific person and never shared amongst other coworkers.

#### **Restrict Administrative Privileges**

Election administrators are responsible for creating many of the county personnel's user accounts and appropriate permissions. This is generally referred to as a role – a group of access permissions relative to a database or application. These roles can be built to suit a particular individual or developed for a position within the elections office. For security purposes, it is recommended that each role be granted the minimum level of access required in order to perform necessary tasks.

# **Limiting Exposure**

External devices such as personal jump drives, tablets, iPods, and smartphones, can pose a threat to the computer systems and networks of an election office. These devices should never be connected to office hardware, as this is a potential attack vector.

Also, using an office computer to view personal email accounts, social networks, and retail websites can expose systems to cyber threats. Office email accounts are carefully managed and secured by polices to minimize the risk of potential attacks. Bypassing these safeguards puts not only the user's system at risk, but other systems can become infected as well. If a malicious attachment or link that was originally intended for an individual is opened on an office computer, the threat has been extended to the entire enterprise. Workstations that are used to access county email accounts should never be exposed to these potential vulnerabilities.

# **VOTING SYSTEMS TESTING**

#### **Voting Systems**

A voting system is defined by the Election Assistance Commission's Voluntary Voting Systems Guidelines (VVSG) as the total combination of mechanical, electromechanical, and electronic equipment (including the software, firmware, and documentation required to program, control, and support the equipment) that is used to create ballot definitions; to cast and count votes; to report or display election results; and to maintain and produce any audit trail information.

Montana's Code Annotated provides a simpler definition – any machine, device, technology, or equipment used to automatically record, tabulate, or process the vote of an elector cast on a paper ballot.

For the purposes of this manual, voting systems will include tabulators (precinct and central-count), Voter Assist Terminals (AutoMARKs & Express Vote), and Election Reports Manager (ERM).

# **Performance Testing**

Sometimes referred to as "logic and accuracy" testing, performance testing analyzes a voting system's ability to properly locate each ballot position for every ballot style and ensures a tabulator's ability to accurately compile returns from each ballot.

Testing should be conducted by the election administrator or a qualified member of the county election office staff. Under no circumstances should performance testing be conducted by a vendor. The four types of performance testing are as follows:

- Acceptance Testing
- Internal Testing
- Public Testing
- Election Day Testing

#### **Acceptance Testing**

Acceptance testing is the examination of a voting system to validate that the equipment delivered by the vendor functions in accordance with Federal and State certifications, and to ensure that the device meets the requirements stipulated in the contract with the vendor.

Also, acceptance testing should be performed any time a device is returned after it leaves the possession and control of the election administrator. For example, if a device such as an AutoMARK or ExpressVote is loaned to an outside group or organization for demonstration purposes, acceptance testing should be completed before the device is placed back into the election office's inventory.

Acceptance testing should be performed:

- When a device is first received into inventory;
- After maintenance;
- Anytime a device is returned after it leaves the possession and control of the county election administrator.

# **Internal Testing**

The purpose of these tests is to ensure that the election definition media card is correctly reading ballots and tabulating accurately. Internal testing should be performed as soon as ballots and media are received in order to allow adequate time for corrections, if necessary. Every ballot style should be tested on each tabulator/ballot marking device. A complete test deck should be used during this test. This test is considered a rehearsal for the Public Test.

#### **Public Testing**

13-17-212, MCA requires county election administrators to publicly test and certify that each machine is performing properly. This test must be conducted no more than 30 days prior to an election in which the voting systems are used. This test should mimic the Internal Test in every way – all ballot styles should be tested on all media on all machines, both those systems in use and those reserved as back-ups.

#### **Election Day Testing**

On election day, 5% of each type of voting system must be tested (*ARM 44.3.1713*). These systems should be chosen at random. **If 5% is less than one, a minimum of one device must be tested.** All voting systems, both backup equipment and equipment in-use, should be considered when performing this test.

#### **Testing Methodology**

There are three different types of analyses that should be conducted when testing: physical analysis, diagnostic analysis, and functional analysis.

#### Physical Analysis:

- Ensures the device is not physically damaged
- Inspection of the exterior of the device and the case containing the device
- Inspection of latches and hinges of the device and the case containing the device
- Inspection of all doors and locks

#### Diagnostic Analysis:

- Ensures that all of the electrical and mechanical components of the device are operating correctly
- Testing of all input/output devices (e.g. card readers, printers, earphones, and personal accessibility devices)
- Testing of all ballot feed paths
- Testing of all touchscreens for clarity and calibration
- Testing all time and date settings

# Functional Analysis:

- Testing to ensure that the correct versions of software/firmware are installed on the device
- Testing to verify that the device is recognizing each ballot position
- For tabulators, using a test deck to ensure that the device is correctly compiling results

#### **Test Deck**

A test deck is the tool used to determine the logic and accuracy (i.e. functionality) of a tabulator. A test deck is comprised of marked ballots with a predetermined outcome set forth in a matrix. Test decks should include every ballot style for a given election and be prepared by the election administrator, **not the vendor**.

Test decks should include the following types of ballots:

- Voted ballots
- Blank ballot
- Overvoted ballot
- Undervoted ballot
- Marginal mark ballot
- Folded ballots (folded in the same manner as absentee ballots)

#### **Test Deck Ballot Matrix**

In order to construct a test deck, a ballot matrix must first be developed. The matrix is a spreadsheet that contains every candidate/choice for each contest on all ballot styles (e.g. every precinct/split, each party's ballot in a primary election, etc.). The number of ballots in a test deck will vary based on the number of contests, candidates, and ballot styles. Each candidate/choice should receive at least one vote. In order to determine accuracy of tabulation, each candidate/choice should receive a different number of votes.

				Ballot														
Precinct	Race	Candidate	Votes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Contest A	Candidate 1	5					Х	Х	Х	Х	Х						
1	Contest A	Candidate 2	4				Х						Х	Х	Х			
1	Contest A	Candidate 3	3			Х										Х	Х	
1	Contest A	Candidate 4	2		X													Х
1	Contest A	Write In	1	Х														
1	Contest B	Candidate 5	4				Х	Х	Х	Х								
1	Contest B	Candidate 6	3			Х					Х	Х						
1	Contest B	Candidate 7	2		X								Х					
1	Contest B	Write In	1	Х														
1	Contest C	Candidate 8	3			Х	Х	Х										
1	Contest C	Candidate 9	2		Х				Х									
1	Contest C	Write In	1	Х														
1	Contest D	Choice 10	2		Х	Х	0											
1	Contest D	Choice 11	1	Х			0											

The sample matrix above shows examples of overvoted ballots (red cells), undervoted ballots (green cells), and the method for ensuring that each candidate/choice for each contest receives a different number of votes. This example is for one ballot style (e.g. precinct) and should be modified for each applicable ballot style.

# **Testing Procedures by Voting System**

#### **Ballot Marking Device (AutoMARK)**

#### Physical Analysis:

Conduct the following with the ballot scanner turned OFF.

- Examine the unit for cracks, dents, and structural deficiencies (Case, cover, latches, hinges, wheels, stand, power cord, plug, etc.).
- Verify that there is a sufficient amount of paper in the printer.
- Ensure that there is an ink cartridge in the printer and that the print head is clean.

#### **Diagnostic Analysis:**

Use the silver barrel key to access the flashcard drive and insert the flashcard. Ensure that the flashcard is inserted with the tail pointing towards the touch screen. Do not force the flash card into the drive as this can damage the unit.

- Turn the voter assist terminal ON and, as it boots up, verify that the correct versions of the operating system and firmware are installed.
- Verify that the date and time are correct.
- Verify the screen condition, clarity, and calibration (calibrate if necessary).
- When screen displays "Insert Your Ballot," turn the mode switch key to the "TEST" position.
- Print a test ballot to verify that the printer is operating correctly.
- Unplug the unit and verify that it will operate on battery power alone.
- Verify that the battery charger will charge the battery.
- Test access ports and flash card slot (e.g. headphone jack, personal device ports, etc.).

#### **Functional Analysis:**

- Remove ballot stub and insert a ballot into the terminal.
- Insert test ballots in different orientations (face up and face down, backwards and forwards, etc.).
- Manually enter one vote for each candidate or issue and verify that each candidate and issue has received exactly one vote (test for blank ballots, overvotes, undervotes, and write-ins).
- Test all user functions (touch screen buttons, keypad keys, headphone commands, etc.).
- Mark votes and print votes for all candidates and ballot issues. Be sure to test for blank ballots, overvotes, undervotes, and write-in votes).
- Print voted test ballots to verify that the printer is accurately marking selections and operating correctly.
- Using additional ballots, repeat steps above until each selection has been selected and printed. Insert additional ballots in different orientations (face up and face down, forwards and backwards).
- Use pre-marked ballots to verify the terminal's ability to accurately identify pre-marked ballots. Be sure to test for blank ballots, overvotes, undervotes, and write-in votes.
- Turn the mode switch key to the "OFF" position.

#### **Ballot Marking Device (ExpressVote)**

#### Physical Analysis:

Conduct the following with the ExpressVote turned OFF.

 Examine the unit for cracks, dents, and structural deficiencies (Case, cover, latches, hinges, stand (if provided), power cord, plug, etc.).

#### Diagnostic Analysis:

- Use the key to access the usb ports. Use a T10 star-shaped screwdriver to loosen the Torx screw and move the protective slide to expose the USB ports. Insert the USB flash drive(s). Do not force the USB flash drive into the port as this can damage the unit.
- Turn the voter assist terminal ON and, as it boots up, verify that the correct versions of the operating system and firmware are installed.
- Verify that the date and time are correct.
- Verify the screen condition, clarity, and calibration (calibrate if necessary).
- Enter the corresponding election code.
- Initiate a voting session by inserting an unmarked ballot card into the paper ballot feed.
- Choose precinct to vote if programed with multiple precincts/splits.
- Vote and print one ballot card.
- Confirm that the ballot card has the corresponding races and printing is legible.
- Unplug the unit and verify that it will operate on battery power alone.
- Test access ports and secondary devices (e.g. headphones, directional pad, personal device ports, etc.).

#### **Functional Analysis:**

- With the machine on and in voting mode, insert a ballot card into the terminal.
- Manually enter one vote for each candidate or issue and verify that each candidate and issue has received exactly one vote (test for blank ballots, overvotes, undervotes, and write-ins).
- Test all user functions (touch screen buttons, keypad keys, headphone commands, etc.).
- Mark votes and print votes for all candidates and ballot issues. Be sure to test for blank ballots, overvotes, undervotes, and write-in votes).
- Examine voted test ballot cards to verify that the device is accurately recording selections and operating correctly.
- Using additional ballots, repeat steps above until each selection has been selected and printed.
- Test inserting additional ballot cards in different orientations (face up and face down, forwards and backwards).
- Use printed / voted ballot cards to verify the terminal's ability to accurately identify printed ballots.
- Turn the machine off.

# Tabulators (M100/DS200/M650/DS450/DS850)

#### Physical Analysis:

Conduct the following with the tabulator turned OFF.

- Examine the unit for cracks, dents, and structural deficiencies (Case, cover, latches, hinges, wheels, stand, power cord, plug, etc.).
- Verify that there is a sufficient amount of paper in the printer.

#### Diagnostic Analysis:

Conduct the following with the tabulator turned ON. Some of these tests may require manager/administrator privilege.

- Install the election definition media card and turn the mode switch key to "OPEN Poll."
- Use the "Initial State Report" to verify the date, time, and firmware version.
- Verify that the date and time are correct.
- Verify the screen condition, clarity, and calibration (calibrate if necessary).
- Print a test output to verify that the printer is operating correctly.
- Unplug the tabulator and verify that it will operate on battery power alone.
- Verify that the battery charger will charge the battery.
- Test all ports and card slots (e.g. serial ports, media card slots, etc.).

### **Functional Analysis:**

Conduct the following with the ballot scanner turned on Election (TEST) mode. Install the election setup for the test ballot, then:

Open the polls (if asked by the system).

- If prompted, turn the mode switch key to "VOTE" (if applicable)
- Zero totals.
- Print zero tape.
- Use the pre-marked test deck of ballots to process a significant number of ballots on the tabulator.
- Close the election on the tabulator.
- Print the results.
- Verify the vote counts are correct.
- Zero totals.

# **Election Management System (Election Results Manager)**

#### **Physical Analysis:**

 Verify that all hardware components of the EMS computer are turned on and functioning properly (including printer(s), disk drives, etc.).

#### **Diagnostic Analysis:**

- Turn on the EMS computer.
- Verify that the correct versions of the computer's operating system and the EMS software are installed.

# **Functional Analysis:**

- Verify that the EMS program is installed and that the computer is not connected to any network.
- If not already completed, load the election definition database on the EMS computer.
- Verify the date, time, and software version are correct.
- Verify that the ballot tabulators will support election definition media card prepared at the county.
- Load election definition media card into the tabulator and run the test deck through the tabulator in order to count the ballots.
- Close the election on the tabulator and print the vote totals.
- Use the county method for transporting the media.
- Once the media has been transported, load vote totals from the tabulator media onto the EMS computer.
- Print the EMS reports and verify that they match the tabulator's printed totals.
- Zero the election totals and close the election on the EMS computer.

# **VOTING EQUIPMENT INVENTORY**

As required by the Help America Vote Act (HAVA), inventory of equipment used in elections must be recorded. The title is vested with the county upon acquisition, regardless of funding. Changes to county voting equipment shall be recorded on the county's property records and reported to the Secretary of State's Office. Furthermore, equipment shall be used in the purpose for which it was acquired as long as needed, whether or not the program continues to receive Federal funding.

Inventory controls – the procedures for managing and replacing equipment – for voting systems must meet the following minimum requirements:

- Maintain property records which include the following information:
  - Model Number
  - Status (In Use/Not In Use)
  - Serial Number
  - Storage Location
  - Election Day Location
  - Condition
  - Current Hardware Management Agreement (HMA)
  - HMA Expiration
  - Title Holder
  - Acquisition Date
  - Cost
  - Federal Share (Percentage, if any)
  - State Share (Percentage, if any)
  - County Share (Percentage, if any)
- Conduct and reconcile a physical inventory of the property at least once every two years and provide a copy to the Secretary of State's Office.
- Develop a control system to ensure adequate safeguards to prevent loss, damage, or theft of the property. Any loss, damage, or theft must be investigated.
- Proper procedures for the sale, trade-in, or disposal of equipment must be established and followed to ensure the highest possible return.
  - For voting systems purchased in whole or in part with Federal grant funds, there may be an obligation to report the disposition of voting systems to the grantor (i.e. Secretary of State's Office). When voting systems are being sold, traded-in, or otherwise disposed of, the collective value of all of the machines will determine the county's reporting obligation.

- If the combined fair market value of all machines is less than \$5,000, Federal grant policy allows a county to sell, trade, or dispose of the equipment without obligation for reporting.
- If the combined fair market value of all machines is \$5,000 or more, Federal grant policy requires the county to report the sale, trade, or disposal of the equipment to the Secretary of State's Office.

# **TROUBLESHOOTING**

The following information has been provided by Election Systems & Software (ES&S) from their troubleshooting guidelines. Not all voting systems and election equipment are covered in this chapter and this office advises contacting ES&S directly when attempting to resolve issues with voting systems. Issues with voting systems functionality should be reported to ES&S for resolution and to the Secretary of State's Office for documentation.

# M100 Troubleshooting

**Problem:** Ballots will not feed into the M100. They go in part way and are returned with the message "Missed Timing Mark Error (101)."

**Cause:** The ballot cannot pass from the M100 to the ballot box because the flap covering the entrance to the ballot box is in the closed position.

**Solution:** Without turning off or unplugging the M100 equipment, unlock the front access panel. Slide the M100 forward, lift the flap and slide the M100 back into place, assuring the diverter connection is firmly seated. The M100 Precinct Scanner can now process ballots.

Flap in open position

**Problem:** When printing the results report, the message "Printer Time Out – Abort Printing?" appears. Why and how should I answer the question "Yes" or "Continue?"

**Cause:** The thermal paper in the M100 cannot advance because the printer is out of paper, there is a paper jam, or the paper release lever is in the up position.

**Solution:** Open the access panel and remove the printer cover on the M100. If the printer is out of paper, install a new roll. If there is a paper jam, remove the jammed paper and re-thread the paper. If the gray paper release lever is in the up position, push it down so the tension on the feed rollers is resumed.

Choosing "Yes" or "Continue" is the choice of the operator. "Yes" means printing will cease after the buffer is empty. Printing of the report will need to be manually restarted.

Choosing "Continue" will allow the report to continue printing once the paper issue is resolved.

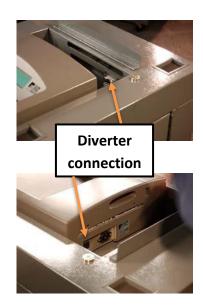


**Problem:** During the opening of the polls, the error message "Diverter Not Found" appears. What does that mean and should I press "Continue?"

**Cause:** The M100 is not fully seated into the ballot box via the electronic diverter connector.

**Solution:** Turn the Mode Key to the off position. Unlock and open the front access panel. Slide the M100 forward and inspect the diverter connection for damage. If no visible damage, slide the M100 back into position making sure it is firmly in position. Turn the Mode Key to the Open/Close Polls position. If the error message is received a second time, contact ES&S Customer Service for further instructions.

Pressing "Continue" will cause the diverter functionality to not be available. All ballots will fall to the left side of the ballot box. Write-ins and/or blank ballots will then need to be hand sorted. Do not press "Continue" unless instructed to do so by ES&S Customer Service.



**Problem:** The scanner has been turned on and the message "No Election Card" appears. What does this mean? Can polls be opened for voting?

**Cause:** The PCMCIA card is missing, blank, or not installed correctly.

**Solution:** Ensure the PCMCIA card is installed correctly in one of the two slots available. A small black button to the right of the card will pop out and be flush with the end of the card if it is correctly and fully installed. If the M100 is still unable to detect the card, contact ES&S Customer Service for another PCMCIA card. The M100 will not be ready for voters to use until a working card is obtained, as the poll opening process cannot be completed. Utilize the Emergency/Uncounted Ballot Bin until the alternate card is delivered and installed.



**Problem:** After turning on the M100 the screen shows "No A/C" in the right hand corner. What does this mean? **Cause:** The M100 is not plugged into the AC power cord or the wall outlet is defective.

**Solution:** Assure all power cords are plugged in securely. Test all outlets using a nightlight or other small electrical device. If using a strip power cord (not recommended),



ensure the strip is turned on. Check M100 power cord for damage. If damage is found, replace the cord.

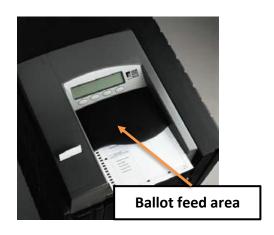
**Problem:** There is a "Ballot Jam" error message appearing on the equipment. How can this be resolved? **Cause:** Ballots may become jammed due to damaged ballots, debris in the ballot feed area, or diverter issues inside the ballot box itself.

**Solution:** Part of the ballot should be visible either in the front ballot feed area or from the back slot of the M100. Tug gently from the front if you are able to grasp enough of the ballot. To retrieve from the back, unlock the access door in the front of the ballot box. Slide the M100 equipment forward. Retrieve the ballot by tugging gently. Once removed, slide the M100 back into the ballot box, then close and lock the access panel. Clean the feed area with canned pressurized air to ensure the path is free of debris.

For ballots jammed in the ballot box area – the diverter equipment sometimes causes the ballots to not drop into the ballot box. When ballots do not drop, they accumulate on the diverter slope and back up until a ballot jam is caused. IF ALLOWED, open the ballot box, retrieve the ballots caught on the diverter slope. Since these ballots have been tallied, do not send through the M100 again. Follow your jurisdiction procedures on handling jammed ballots. Some will have the poll worker sort the jammed ballots into the correct ballot box side and some will have the poll worker place the ballots into an envelope, then store in the ballot box. Those ballots are then sorted at election central.

Lock all ballot box doors, secure the key, and continue with the voting process.







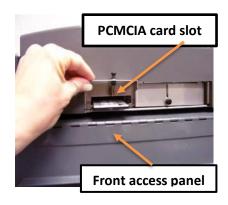
**Problem:** What can be used to clean the exterior of the M100 including the LCD-message panel?

**Solution:** The M100 LCD Panel and exterior can be cleaned with isopropyl alcohol wipes or isopropyl alcohol on a soft cloth. **Do not use products containing ammonia** (e.g. glass cleaners). This can cause deterioration over time.

Problem: The M100 equipment has failed and is being replaced by another unit. What steps are needed to preserve the votes and ballots already cast by voters?

Cause: The M100 equipment is inoperable due to equipment failure or ballot jammed scenario.

Solution: Typically, ES&S personnel deal with the replacement of equipment along with appropriate polling place people and witnesses. As a poll worker, if you are asked to replace the equipment, follow the steps below.



- If not already OFF, insert and turn the Mode Key to the OFF position. It is not necessary to close the polls, just turn off the equipment.
- Unlock the front access panel.
- Remove the PCMCIA card from the front of the equipment. Note: The PCMCIA card may
  be secured in the equipment and the seal will need to be broken. Be sure to follow all
  jurisdiction procedures for breaking and re-securing the seal.
- Slide the M100 forward and unplug the power cord.
- Label and pack the inoperable equipment in the transport case.
- Install replacement M100 onto the ballot box.
- Insert the PCMCIA card (retrieved from the inoperable piece of equipment) into the slot.
- Close and lock the front access panel.
- Turn the Mode Key to VOTE.
- Voters can now use the new equipment to process ballots. Note: The PCMCIA card retrieved from the inoperable equipment contains the results of the ballots in the ballot box. Do not rescan the ballots.

**Problem:** The ballot box is getting full. What should be done?

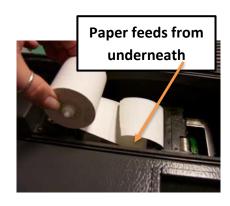
**Cause:** The ballot box holds approximately 3,000 14"-ballots on each side. Check the number of voters on the M100 equipment periodically to determine if the ballot box has the potential to become full.

**Solution:** Follow your jurisdiction's procedures on removing the ballots from the ballot box and securing until the polls close.

**Problem:** The reports are generating, but no printing is visible on the paper. What's wrong?

**Cause:** The M100 printer uses thermal paper and heat transfer to print the information. Printer functionality without visible print means the paper roll is inserted incorrectly.

**Solution:** Reinsert the paper roll. Be sure the paper comes from underneath into the tension rollers. Reprint report(s) as necessary.



**Problem:** Occasionally, when a voter inserts their ballot, an error message of "Ballot Too Long" is appearing. Why does this happen and what steps are needed to fix? **Cause:** Two scenarios cause this to happen. First, the voter could be holding onto their ballot too long and the rollers are not able to advance the ballot properly. Secondly, if stubs are used on your jurisdiction's ballots, the stub was not removed.

**Solution:** Remove the ballot stubs in accordance with your jurisdiction's procedures. Ask the voter to re-insert their ballot.



# **DS200 Troubleshooting**

**Problem:** Ballots will not feed into the DS200. They go in part way and are returned with the message "Missed Timing Mark Error (101)."

**Cause:** The ballot cannot pass from the DS200 into the ballot box because the flap covering the entrance to the ballot box is in the 'locked' position.

**Solution:** Without turning off or unplugging the DS200 equipment, go to the back of the DS200 Ballot Box to access the Power Cord Compartment. Move the silver bar to the down or to the 'unlocked' position. The DS200 Precinct Scanner can now process ballots.



**Problem:** The scanner has been turned on and the message "Election Definition Not Found" appears. What does this mean? Can polls be opened for voting? **Cause:** The USB memory drive is missing, blank or not installed correctly.

**Solution:** Assure the USB memory drive is installed correctly in one of the slots available. If the DS200 is still unable to detect the card, contact Election Central for another USB memory drive. The DS200 will not be ready for voters to use until a working drive is obtained, as the poll opening process cannot be completed. Utilize the auxiliary ballot bin until the alternate USB memory drive is delivered and installed.



**Problem:** After turning on the DS200 the screen power icon on the top right of the screen shows the plug is not connected. What does this mean?

**Cause:** The DS200 is not plugged into the AC power cord or the wall outlet is defective.

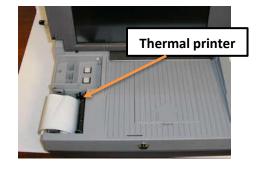
**Solution:** Assure all power cords are plugged in securely. Reminder: there are two parts to the DS200 power supply, make sure the transformer is plugged into the cord. Test all outlets using a nightlight or other small electrical device. If using a strip power cord (not recommended) assure the strip is turned on. Check DS200 power cord for damage. If damage is found, replace the cord.



**Problem:** The reports are generating, but no printing is visible on the paper. What's wrong?

**Cause:** The DS200 printer uses thermal paper and heat transfer to print the information. Printer functionality without visible print means the paper roll is inserted incorrectly.

**Solution:** Reinsert the paper roll. Reprint report(s) as necessary.



**Problem:** What can be used to clean the exterior of the DS200 including the touchscreen? **Solution:** The DS200 touchscreen and exterior can be cleaned with isopropyl alcohol wipes or isopropyl alcohol on a soft cloth. **Do not use products containing ammonia** (e.g. glass cleaners). This can cause deterioration over time.

Problem: The DS200 equipment has failed and is being replaced by another unit. What steps are needed to preserve the votes and ballots already cast by voters?

Cause: The DS200 equipment is inoperable due to equipment failure or ballot jammed scenario.

Solution: Typically, ES&S personnel deal with the replacement of equipment along with appropriate polling place people and witnesses. As a poll worker, if you are asked to replace the equipment, follow the steps below.

 If not already turned off, press the power button to turn the unit to "Off". It is not necessary to close



the polls, just turn off the equipment.

- Unlock the access door on the left side of the scanner.
- Remove the USB memory drive from the equipment.

The USB memory drive may be secured in the equipment and the seal will need to be broken. Be sure to follow all jurisdiction procedures for breaking and re-securing the seal.

- Unlock the front access panel to remove the DS200 unit.
- Slide the DS200 unit forward and unplug the power cord.
- Label and pack the inoperable unit in the transport case.
- Unpack the new DS200 unit and install onto the ballot box being sure to plug in the power cord.
- Insert the USB memory drive (retrieved from the other inoperable unit) into the slot.
- Close and lock the front access panel.
- Press the power button inside the USB memory drive area to turn on the scanner.
- Press "Resume Voting" to continue with the voting process.

The USB memory drive retrieved from the inoperable equipment contains the results of the ballots in the ballot box. Do not rescan the ballots.

# **DS450 & DS850 Troubleshooting**

**Problem:** The power cords for the DS450/DS850, printers, and UPS are all plugged in to electrical receptacles, but the DS450/DS850 screen indicates that it is on battery backup.

Cause: The report printer may be plugged into a receptacle for battery backup on the UPS unit. When the report printer starts up from being cold, it draws too much current and throws the UPS into switching over to battery backup, which then sends a message to the DS450/DS850 saying that it is on battery backup.

Solution: See the diagram on the right for the correct connections for the UPS unit.

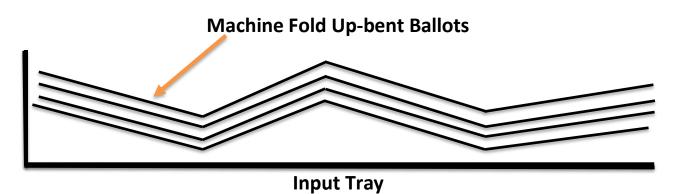


**Problem:** When processing folded ballots on the DS450/DS850 pick errors and ballot jams occur.

**Cause:** Improper preprocessing and loading of folded ballots into the DS450/DS850. **Solution:** The following guide lines will minimize potential issues when processing folded ballots.

 Ballot Orientation - Folded ballots must be stacked in the same orientation for proper processing in the DS450/DS850. If the ballots have corner cuts use this corner to align all of the ballots in the stack. If the ballots have no corner cuts place the ballots on their side. Examine the way the ballots are nested. Ballots orientated in different directions can easily be seen.

- Back Bending Each machine fold must be completely bent back in the opposite direction
  of the machine fold, to break the grain of the paper. Back bend in stacks of 100 or less
  ballots. Each operator should only back bend as many ballots as they are capable of at a
  time. For some operators this may be as few as 10 ballots.
  - If a ballot is properly back bent, breaking the grain of the paper, each fold will move as easily in either direction. If a fold moves easier in the direction of the machine fold, it is not properly back bent.
- Loading Ballots On Input Tray Only load stacks of 100 ballots or less into the input tray. Larger stacks may result in improper picking of ballots and increase the chances of jamming in the output tray.
  - When placing ballots into the input tray, ensure the ballots are loaded in such a way that the first fold is a machine fold up-bend. Also try to load the ballots in an orientation that minimizes the printing under the pick mechanism. The ballots shown in the diagram below are for illustration purposes only. Properly back bent ballots will appear flat in the input tray.



**Note:** When a ballot jam occurs you may need to rescan all of the ballots in a batch or just a few.

If you see **4** instruction screens, you need to rescan **ALL** of the ballots on unit including the bottom and middle bins.

If you see **2** instruction screens, you need to rescan the top tray and the input tray. However, the middle and bottom trays have been tabulated and **DO NOT** need to be rescanned.

**Problem:** Wrong Bin error when ballots feed to the wrong output tray.

**Cause:** This can occur if the edge closest to the back plate is damaged or if the corner is severely bent over. Dirty light barriers can produce this error as well.

**Solution:** Check the overall integrity of the ballots in a stack before scanning. Make sure the DS450/DS850 is routinely dusted and cleaned.

**Problem:** Ballot Jam message when no jam present.

Cause: This occurs when one or more of the light barriers get dirty with paper dust.

**Solution:** Blow out all 15 sets of light barriers with compressed air to make sure all light barriers are clean.

**Problem:** Output tray getting full of jammed ballots

**Cause:** This can occur for multiple reasons, cut ballots, not all folded ballots are the same orientation, or a ballot didn't clear the lead-in of the output tray.

**Solution:** When this happens, the tray must be emptied before the input tray fully lowers. (You have about 3 seconds to pull out the jammed ballots).

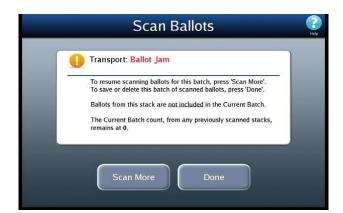
If the ballots are not removed in time, a *TRANSPORTER NO RESPONSE* error message will be displayed and a shutdown will be required. This is because the bin full arm must clear the top sensor for the transport to respond to the firmware in the time it expects it to. So if the output tray arm is held fully up by ballots, the sensor is not cleared and the transport doesn't respond and the error message is displayed.

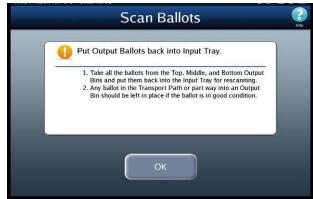
If you're not able to clear the jammed ballots before the input tray lowers, shutdown the machine as indicated on the screen. Reboot and the machine will still have the current batch count that was present before the jam occurred. The ballots that were being scanned at the time of the jam will need to be rescanned as they were not processed.

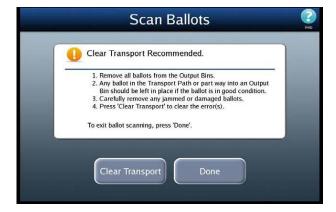
**Problem:** Ballots have jammed in the Ballot Transporter.

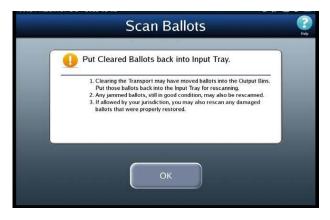
Cause: Ballots may jam for a variety of reasons.

**Solution:** Regardless of the reason for the jam, follow the on-screen directions (below) to clear the jam.







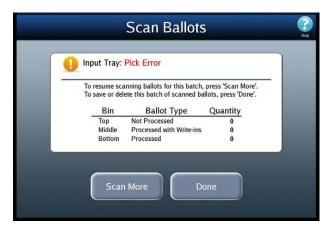


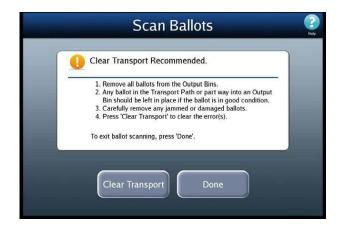
**Problem:** Pick failed to grab ballots.

Cause: Dirty rollers, dense toner on ballot, input tray not set high enough, folded ballots not

prepped correctly.

**Solution:** Follow on-screen directions (below).

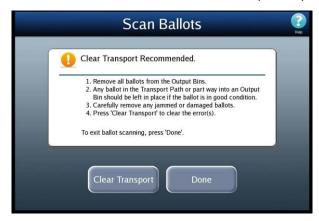




**Problem:** One of the output trays is full.

**Cause:** The output tray is full or ballots didn't stack properly and started to fold upon themselves.

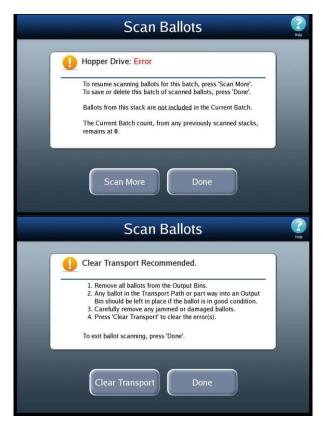
Solution: Follow on-screen directions (below).

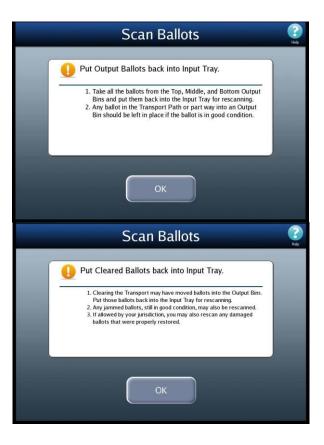


**Problem:** Hopper Drive Error

**Cause:** Can occur if ballots are not far enough forward in the Input tray/hopper.

**Solution:** Follow on-screen directions (below).

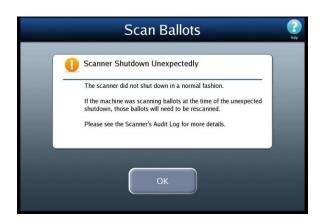




**Problem:** DS850 scanner was shut down without using the shutdown feature.

Cause: User didn't use the on-screen "shut down" button.

Solution: Follow on-screen directions (below).





**Note:** After logging in, the DS450/DS850 will complete a data integrity check to make sure the counts are correct. This is to prevent the totals ever being different on the screen and what is reported on a Totals report.

**Problem:** The pick mechanism fed multiple ballots into the scanner.

**Cause:** Folded ballots may have nested or stuck together. The reverse Belt tension may be set too loose.

**Solution:** The DS850 scanner may be configured to stop when multifeed occurs, which will automatically stop the scanner, and the following message will appear on the screen:

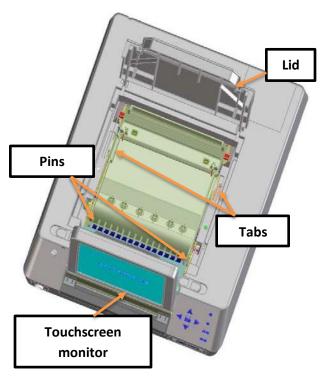


#### **AutoMARK Troubleshooting**

**Problem:** The ballot is jammed inside the AutoMARK equipment. What steps do I take to retrieve the ballot? **Cause:** Although causes vary, the ballot input incorrectly or AutoMARK rollers not functioning properly are the more typical reasons for ballot jams.

**Solution:** Insert and turn Mode Key to "TEST." Once the Main Menu appears, press the "EJECT BALLOT" button. If the ballot does not eject, follow these instructions to retrieve the ballot from within the AutoMARK.

- Tilt the touchscreen monitor forward and lift the lid to the open position.
- Locate the two tabs on the right and left side of the top cleanout tray.
- While pushing the tabs inward, lift up to remove the top cleanout tray.
- Remove ballot or paper jam being careful to not rip the paper.
- To re-install the tray, align the two front pins with the guides. Lower the top cleanout tray and press into place.
- Follow your jurisdiction's procedures for spoiling and issuing a new ballot (if necessary).



**Problem:** An error message saying, "Alert: An error has occurred. Files have been tampered with or a wrong access code has been entered." How do I correct this so the files can be accessed?

**Cause:** Each AutoMARK flash card is locked with a password when the election definition is created.

**Solution:** Follow these steps to unlock the flash card:

- Turn the Mode Key to TEST.
- From the Main Menu, choose UNLOCK FLASH CARD.
- Press the white box to retrieve a key entry pad.

Enter the generic flash card code of "12345678" or the jurisdiction specific flash code given to you by ES&S.

**Problem:** The voter pushes the oval/arrow for one candidate and another candidate is selected. What's wrong?

**Cause:** The alignment of the touchscreen with the point of touch is not adjusted correctly. This alignment process is called calibration.

**Solution:** Calibration of the touchscreen is completed by following these steps:

- Insert and turn the Mode Key to TEST.
- From the Main Menu, choose CALIBRATE TOUCH SCREEN.
- Choose CALIBRATE to confirm the action.
- Align the touch points by pressing and releasing the center of each cross-hair that appears on the screen.
- If satisfied with the actions, press anywhere on the screen to continue.
   Repeat if necessary.

**Problem:** The flash card is not installed. How do I insert the flash card?

**Solution:** Insert the flash card ensuring the label is to the left and the connection edge (with holes) goes into the unit. **Warning:** There is only one direction to install the flash card. Do not force the card into the equipment.

**Problem:** During elections, we received errors related to the ink cartridge. What practices can be done to help avoid ink problems?

**Solution:** Because ink is a necessary part of the AutoMARK processing, there are several items that would be considered "good practices."

- Know and practice the correct way to install the ink cartridge.
- Always use a new ink cartridge for election day.
- Have extra ink cartridge available.





**Problem:** The touch screen on the AutoMARK has many fingerprints and smudges. How do I clean the equipment?

**Solution:** The AutoMARK touch screen and exterior can be cleaned with isopropyl alcohol wipes or isopropyl alcohol on a soft cloth. **Warning:** Do not use products containing ammonia (e.g. glass cleaner). This can cause the screen to deteriorate over time.

**Problem:** After several minutes, the following message appears on the AutoMARK screen:

"Alert! A problem has occurred. Please notify an election official. Election Official: A previous voting session has expired and the ballot is being held within the Voter Assist Terminal. Use the Test Mode to eject the ballot."

Why did it do this and how do I correct the issue?

**Cause:** This error message appears after the AutoMARK has been idle, with a ballot inserted for 10 minutes.

**Solution:** If a voter is still using the AutoMARK, the poll worker will need to insert and turn the Mode Key to TEST. The ballot will be returned unmarked. Reinsert the ballot into the AutoMARK or follow your jurisdiction's spoiling procedures and issue a new ballot. If the voter has left the polling place, follow the steps above to retrieve the ballot and follow the spoil procedures. **Note:** The feature was designed for the walk-away voter situation. This way, no other voter will have access to the ballot and potentially vote twice.

**Problem:** When the voter feeds their ballot, the AutoMARK is not accepting the ballot. What could be wrong?

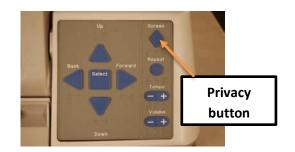
**Cause:** There are many issues that could cause the ballot to not be accepted by the AutoMARK including damaged ballots, feed path is dirty or obstructed and feeding of the ballot incorrectly. These issues can cause many different error messages including "Paper misfeed" and "Ballot not recognized".

**Solution:** Depending on the problem, one or more of these suggestions may help:

- Check the ballot to assure there is no damage. If damaged follow your spoiled ballot procedures and issue another ballot to the voter.
- Try inserting the ballot with another orientation.
- Assure the correct type of ballot has been given to the voter. Occasionally, ballots for another polling place are delivered to the wrong precinct. Contact your Election Central official if the incorrect ballots have been delivered.
- Try re-feeding the ballot into the ballot tray, being careful to feed it as straight as possible.
- Clean the ballot feed tray with pressurized air.

**Problem:** As a poll worker I don't want to invade the voter's privacy when answering their questions. How can I preserve their privacy?

**Solution:** The AutoMARK is equipped with a privacy key which will turn the screen black when viewing. The diamond shaped key at the top-right of the keypad allows the screen to be un-viewable. This will preserve the privacy for the voters who are using only the audio feature to select their votes or for voters who request assistance from a poll worker. Poll workers can easily access the button when approaching the AutoMARK from behind. Make sure you tell the voter who is using a visual ballot to press the button again to resume the ballot on the screen.



**Problem:** The AutoMARK is difficult to move. How do I properly move the equipment? **Solution:** Because the AutoMARK is approximately 48 pounds and large, it is recommended that two people move the AutoMARK using the built in handles along each side of the equipment. **Warning!!** Do not pick up the AutoMARK by the corners.

**Problem:** Our jurisdiction uses ballots with stubs. What are the best practices for using these types of ballots with the AutoMARK?

**Solution:** On occasion, tearing off the stub will cause the AutoMARK to misread the edge of the page and give an error message. Using the 1, 2, 3, 4 fold method (folding the stub at the perforation back and forth 4 times), then tearing off the stub helps define the edge so the AutoMARK can identify the edge. The AutoMARK's firmware does allow for ballots with stubs attached provided the election definition is coded to accommodate the additional length.

# **Express Vote Troubleshooting**

(ES&S Support 1-800-247-8683)

# Appendix A: Troubleshooting the ExpressVote

#### **Jammed Ballot Card**

PROBLEM: The card is jammed inside the ExpressVote equipment.

CAUSE: Although causes vary, the more typical reasons for card jams are:

·The card was inserted incorrectly, or

·The ExpressVote rollers are not functioning properly.

**SOLUTION**: Open the security compartment on the left side of the machine. Change the Mode Switch to OFFICIAL. Once the Main Menu appears, press the EJECT CARD button.

If the card does not eject, open the security panel on the right side of the machine. Locate the card and gently pull the card out of the machine. Remove the card jam being careful to not rip the paper. Close and re-lock the security panel. Follow your jurisdiction's procedures for spoiling and issuing a new card if necessary.

#### Screen Calibration Issues

PROBLEM: The voter pushes the oval for one candidate and another candidate is selected.

**CAUSE**: This could be caused by a dirty touch screen, or the alignment of the touch screen is not adjusted correctly.

SOLUTION: Put isopropyl alcohol on a soft cloth and wipe clean.

WARNING: Do not use products containing ammonia, such as Windex. This can cause the screen to become deteriorated over time. Use only isopropyl alcohol for cleaning the touch screen and scanner.

If the screen calibration issue is not due to a dirty screen, please contact your Election Administrator.

# **Idle Error Message**

PROBLEM: After several minutes, the following message appears on the ExpressVote screen:

"Continue Voting? There has been no activity for five minutes.

Next Step: To continue voting, touch 'Previous'. To receive your card without printed selections, touch 'Exit'."

CAUSE: This error message appears after the ExpressVote has been idle, with a card inserted for 5 minutes.

**SOLUTION**: If a voter is still using the ExpressVote, the poll worker will need to open the left security compartment and switch the Mode to Official. The card can be returned to the voter and be reinserted. Reinsert the card or follow your jurisdiction's spoiling procedures and issue a new card. If the voter has left the polling place, follow the steps above to retrieve the card and follow the spoil procedures.

**NOTE**: The option to go back to previous screen in Voter mode only exists after 5 minutes of inactivity. If the terminal is inactive for another 5 minutes., you will need to go to Official mode and eject the card from the Main Menu.

7